

In re: Deok-Hyung Lee et al.  
Serial No.: 10/801,614  
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### REMARKS

Applicants appreciate the continued thorough examination of the present application, the Examiner's analysis relative to the newly cited reference, U.S. Patent Application Publication No. 2004/0217433 to Yeo et al., and the Examiner's clarification of the rationale in rejecting Claims 1 and 13. In order to advance the present application to allowance, independent Claims 3 and 18 have been canceled. Moreover, the word "laterally" has been added to remaining independent Claims 1 and 13, based on the analysis provided by the Examiner, to thereby reinforce the patentable distinctions over U.S. Patent 6,525,403 to Inaba et al. in view of the Examiner's analysis. This Amendment does not raise new issues, because it is merely consistent with the analysis provided by the Examiner, and is consistent with Applicants' clear intent for the punch-through stop layer of Claims 1 and 13. Accordingly, Applicants respectfully request entry of this Amendment and allowance of the present application for the reasons that now will be described.

In particular, the rejection of Claims 3 and 18 in view of Yeo et al. have now become moot in view of cancellation of these claims. Moreover, remaining independent Claims 1 and 13 both recite a punch-through stop layer. Claim 1 recites:

a punch-through stop layer that is confined laterally to beneath the channel region and having a higher doping concentration than the sidewalls of the fin in the channel region. (Emphasis added.)

Moreover, Claim 13 recites:

a punch-through stop layer that is confined laterally to beneath the channel region and having a higher doping concentration of the predetermined conductivity type than the channel region remote from the top. (Emphasis added.)

In analyzing Claims 1 and 13 relative to Inaba et al., the Examiner notes at the bottom of Page 4:

...and further comprising a punch-through stop layer 17 that is confined to beneath the channel region (note that the channel region is confined to the fin 11A-15-16-21. No part of the punch-through stop layer 17 is formed above the fin)....

The Examiner's analysis is absolutely correct: no part of the punch-through stop layer 17 of Inaba et al. is formed above the fin. However, when Applicants compared Inaba et al. Figure 7 to, for example, Figures 2A and 2B of the present application,

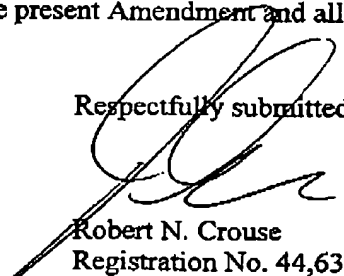
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Applicants were clearly referring to lateral confinement of the punch-through stop layer 62a of the present application in both orthogonal cross-sectional views of Figures 2A and 2B, compared to the p+ layer 17 of Figure 7 of Inaba et al. that extends well beyond the channel region in both orthogonal directions. Specifically, these p+ layers of Inaba et al. Figure 7 extend well beyond the opposing sidewalls of the fin and also extend well beyond the channel region to beneath the source and drain regions 15 and 16. Applicants did not contemplate that the Examiner would read the words "confined to" as encompassing being confined to below the fin, because all of the layers in the substrate are below the fin. However, to eliminate any potential ambiguity, Claims 1 and 13 have been amended to indicated that the punch-through stop layer is confined laterally to beneath the channel region. In view of the above, independent Claims 1 and 13 are patentable over Inaba et al., taken alone or in combination with Brown et al. The dependent claims are patentable at least per the patentability of the independent claims from which they depend.

In conclusion, Applicants appreciate the Examiner's analysis, because it uncovered a potential ambiguity in the claims that was not contemplated by Applicants and that has now be rectified. In view of the above analysis, all of the pending claims are now in condition for allowance. Accordingly, Applicants respectfully request entry of the present Amendment and allowance of the present application.

Respectfully submitted,



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